

Serial No.: 09/545,394  
Group Art Unit: 2154

### AMENDMENTS TO CLAIMS

• Please amend pending claims 1, 2, 4, 5, 9, 10, 12, and 13 as indicated below. A complete listing of all claims and their status in the application are as follows:

- A13
- 1           1.       (currently amended) An adaptive admission control system for a server  
2 application system, comprising:  
3           a request queue that stores incoming requests before ~~they~~ the incoming requests are  
4 serviced by the server application system;  
5           a discard queue that stores requests ~~to be discarded~~;  
6           an actuator coupled to the request ~~queue, queue~~ and the discard queue, ~~and an external~~  
7 ~~listen queue~~ to determine the input rate of the incoming requests from the listen queue during  
8 ~~previous a processing cycles cycle~~, and to send a target number of requests to the request  
9 queue ~~from the listen queue~~ and a remaining number of requests to the discard queue during  
10 the next processing cycle;  
11           a controller coupled to the actuator and the request queue to determine the target  
12 number based on the difference between ~~the actual~~ and desired queue occupancy of the  
13 request queue.
- 1           2.       (currently amended) The adaptive admission control system of claim 1,  
2 wherein the actuator sends the target number of requests ~~from the external listen queue~~ to the  
3 request queue and ~~any the~~ remaining number of requests to the discard queue during the  
4 ~~current next~~ processing cycle if the input rate is greater than or equal to the target number of  
5 requests.
- 1           3.       (original)       The adaptive admission control system of claim 2, wherein the  
2 actuator randomly determines which requests are to be sent to the request queue and which  
3 requests are to be sent to the discard queue so long as the total number of the requests sent to  
4 the request queue is equal to the target number.
- 1           4.       (currently amended) The adaptive admission control system of claim 3,  
2 wherein ~~if the actuator decides to send a request to the request queue~~, the actuator determines  
3 if the incoming request is a new session request and, if so, sends an existing session request  
4 ~~from the discard queue instead of the new request to the request queue~~ when the discard

Serial No.: 09/545,394

Group Art Unit: 2154

5 ~~queue contains the existing session request and discards~~ sends the new session request to the  
6 discard queue.

1 5. (currently amended) The adaptive admission control system of claim 1,  
2 including a listen queue connected to the actuator and wherein the actuator sends the target  
3 number of requests from both the listen queue and the discard queue to the request queue if  
4 the input rate is less than the target number.

1 6. (original) The adaptive admission control system of claim 5, wherein the  
2 actuator retrieves requests from the discard queue by first pulling requests from an existing  
3 session queue of the discard queue.

1 7. (original) The adaptive admission control system of claim 1, wherein the  
2 discard queue further comprises an existing session request discard queue and a new session  
3 request discard queue.

1 8. (original) The adaptive admission control system of claim 7, wherein the  
2 discard queue is cleaned up after every predetermined number of processing cycles.

1 9. (currently amended) A server application system, comprising:  
2 a server application module that performs predetermined server functions based on  
3 external requests from an external listen queue;

4 an adaptive admission control system that controls admission to the server application  
5 module, wherein the adaptive admission control system further comprises

6 a request queue that stores incoming requests before they are serviced by the  
7 server application system;

8 a discard queue that stores requests ~~to be discarded~~;

9 an actuator coupled to the request queue, the discard queue, and ~~an~~ the  
10 external listen queue to determine the input rate of incoming requests received from the  
11 external listen queue during a previous processing cycles, and to send a target number  
12 of requests to the request queue from the listen queue and the discard queue during the next  
13 processing cycle;

14 a controller coupled to the actuator and the queue to determine the target  
15 number based on the difference between ~~the~~ actual and desired queue occupancy of the  
16 request queue.

Serial No.: 09/545,394

Group Art Unit: 2154

1           10. (currently amended) The server application system of claim 9, wherein the  
2 actuator sends the target number of requests from the external listen queue to the request  
3 queue and ~~any the remaining~~ requests to the discard queue during the ~~current-next~~ processing  
4 cycle if the input rate is greater than or equal to the target number.

1           11. (original) The server application system of claim 10, wherein the actuator  
2 randomly determines which requests are to be sent to the request queue and which requests  
3 are to be sent to the discard queue so long as the total number of the requests sent to the  
4 request queue is equal to the target number.

1           12. (currently amended) The server application system of claim 11, wherein if  
2 ~~the actuator decides to send a request to the request queue, the actuator determines if the~~  
3 incoming request is a new session request and, if so, sends an existing session request from  
4 the discard queue instead of the new session request to the request queue when the discard  
5 queue contains the existing session request and discards sends the new session request to the  
6 discard queue.

1           13. (currently amended) The server application system of claim 9, wherein the  
2 actuator sends the target number of requests from both the external listen queue and the  
3 discard queue to the request queue if the input rate is less than the target number.

1           14. (original) The server application system of claim 13, wherein the actuator  
2 retrieves requests from the discard queue by first pulling requests from an existing session  
3 queue of the discard queue.

1           15. (original) The server application system of claim 9, wherein the discard  
2 queue further comprises an existing session request discard queue and a new session request  
3 discard queue.

1           16. (original) The server application system of claim 15, wherein the discard  
2 queue is cleaned up after every predetermined number of processing cycles.

1           17. (original) The server application system of claim 9, wherein the server  
2 application module is a TCP/IP-based server application.

1           18. (original) The server application system of claim 9, wherein the server  
2 application module is a web server application.